

REMARKS

Claims 1-17 are pending in the application. By this Amendment, claim 1 is amended and new claims 9-17 are added. Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version With Markings To Show Changes Made."

The Office Action rejects claims 1-3 and 5-8 under 35 U.S.C. §102(e) by U.S. Patent 6,105,017 to Kleewein et al. (hereafter Kleewein). The Office Action also rejects claim 4 under 35 U.S.C. §103(a) over Kleewein in view of the article to Lu. The rejections are respectfully traversed.

Independent claim 1 recites a first process of enabling a database server operating at a server to store data, which is stored in a database requested by a program operating at a client, to a common storage device which is shared between the client and the server other than a storage device to which the database is stored, and to respond to the requests by transmitting an identifying information which identifies a storage area of the data stored on the common storage device to the program. Additionally, dependent claim 9 (which depends from claim 1) recites that the common storage device stores a result of a database operation. Still further, dependent claim 10 (which depends from claim 1) recites that the first process enables the database server to store data to the common storage device in response to a request by the program operating at the client.

Kleewein includes a computer 10, a computer/server 14 and a local computer 18 (running an application program 19). The computer/server 14 includes a CPU 20, a disk file 22 and a memory 24.

Kleewein's server outputs an identifier of the LOB (large object) stored in a column of a database, and the client accesses the database using the identifier. More specifically, in Kleewein, the identifier for the LOB data is stored in the memory 24 and the application program 19 reads the identifier from the memory 24 to access the LOB data stored in the database. See Kleewein's column 5, lines 65-66; and column 6, lines 13-17.

In contrast, the server discussed in the present application outputs the LOB data. See the claim 1 feature that the first process enables a database server to store data . . . to a common storage device. See also the dependent claim 10 feature that the first process enables the database server to store data to the common storage device in response to a request by the program operating at the client.

In the present application, the client receives the identifying information, which identifies the storage area of the common storage device to which the LOB data is output, to access the common storage device (which is different from the database). See the claim 1 feature of responding to the request by transmitting an identifying information which identifies a storage area of the data stored on the common storage device to the program.

Claim 1 is a method claim that includes specifically claimed processes. This claim specifically recites that the database server stores data to a common storage device and that responds to a request by transmitting an identifying information. Kleewein differs from the present application (and claim 1) in the data/information output from the server, the target of the LOB data accessed by the client, and the identifier for accessing the LOB data.

Another distinction between the present application and Kleewein relates to the overall object of Kleewein and the present application. The present application overcomes bottlenecks due to accesses from a plurality of clients to the database. The claimed first process and second process (of claim 1) allow this object to be obtained. In contrast, Kleewein attempts to prevent the transmission of a massive amount of data in the database. See Kleewein's column 3, lines 22-25. This object of Kleewein differs from the present application and thereby shows that Kleewein's architecture does not support the first process and second process recited in independent claim 1.

The Office Action (and more specifically the May 21 Office Action) suggests that Kleewein's remote database corresponds to the claimed common storage device. However, the common storage device of the present application is for storing the result of a database operation. See, for example, dependent claim 9. In contrast, the remote database is a target of the database operation. Accordingly, the claimed common storage device does not read on the remote database.

The Office Action also appears to assert that Kleewein's inner table corresponds to the claimed common storage device. However, as stated above, the common storage device of the present application is for storing a result of a database operation. See, for example, dependent claim 9. This clearly differs from Kleewein's inner table in which the inner table is the target of the database operation. Accordingly, the claimed common storage device does not read on the Kleewein's inner table.

For at least the reasons set forth above, Kleewein does not teach or suggest all the features of independent claim 1. Claims 2-5 and 9-11 depend from claim 1 and therefore define patentable subject matter. Each of independent claims 6 and 8 define patentable subject matter for at least similar reasons as claim 1. Claims 7 and 12-14 depend from claim 6 and claims 15-17 depend from claim 8 and therefore define patentable subject matter for at least this reason.

In addition, the dependent claims also recite features which further and independently distinguish over the applied prior art. For example, dependent claim 2 recites that a third process of enabling the database server to create a storage area identifying information for identifying the area on the common storage device to which the data is outputted, a fourth process of notifying the program of the storage area identifying information from the database server and a fifth process of enabling the program to refer to the area on the common storage device using the storage area identifying information obtained by the notification to obtain the data. Kleewein

does not teach or suggest that the storage area identifying information is created and is notified from the database server, and the data is referred based on the storage area identifying information.

Dependent claim 3 recites an eighth process of enabling the function to create a storage area identifying information of the common storage device to which the data is outputted. Kleewein does not teach or suggest that the storage area identifying information of the common storage device to which the data is outputted is created. As such, dependent claim 3 defines patentable subject matter for at least this additional reason.

Dependent claim 5 recites a process of enabling the program to refer to the common storage device to which the data is outputted by the database server, at the same node as a node where the database server is in operation to obtain the data. Kleewein does not teach or suggest that the data is referred to at a same node. As such, dependent claim 5 defines patentable subject matter for at least this additional reason.

Dependent claim 9 (and similarly claims 12 and 15) recites that the common storage device stores a result of a database operation. As discussed above, Kleewein does not teach or suggest this feature.

Further, dependent claim 10 (and similarly claims 13 and 16) recites that the first process enables the database server to store data to the common storage device in response to a request by the program operating at client. Dependent claim

11 (and similarly claims 14 and 17) recites that the second process enables the program to refer to the common storage device after the data is stored to the common storage device. Kleewein does not teach or suggest these features of claims 10 and 11 (and claims 12-14 and 15-17).

In addition to the features discussed above, independent claim 6 recites second means for enabling the program to refer to the file where the massive amount of data is outputted from the common storage device by the first means and based on the identifying information, to obtain the massive amount of data. Kleewein does not teach or suggest that the client refers to the file outputted from the database. As such, independent claim 6 defines patentable subject matter for at least this additional reason.

Withdrawal of the outstanding rejections is respectfully requested.

CONCLUSION

In view of the foregoing, it is respectfully submitted that the above-identified application is in condition for allowance. Favorable consideration and prompt allowance of claims 1-17 are respectfully requested.

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Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. (Three Times Amended) A database processing method used in a database system arranged in a client-server manner, comprising:

a first process of enabling a database server operating at a server to store data, which is stored in a database requested by a program operating at a client, to a common storage device which is shared between said client and said server other than a storage device to which said database is stored, and to respond to said request by transmitting an identifying information which identifies a storage area of said data stored on said common storage device to said program; and

a second process of enabling said program to refer to said common storage device based on said identifying information, to obtain said stored data.